

MEMORANDUM



DATE August 13, 1999

TO Distribution

FROM E C Garcia, Projects and New Facilities, Bldg T893A, X5980

SUBJECT PROJECT EXECUTION PLAN FOR THE HGS&A PROJECT - ECG-013-99

The attached is Revision 0 of the Project Execution Plan, RF/RMRS-99-326 UN, for the Headspace Gas Sampling & Analysis Project. If any clarifications or additional information are needed, please call me at X5980.

cc

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HEADSPACE GAS SAMPLING AND ANALYSIS
PROJECT EXECUTION PLAN

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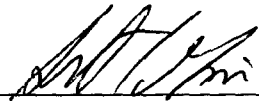
Prepared by Ernest C Garcia
May 1999

**HEADSPACE GAS SAMPLING AND ANALYSIS
PROJECT EXECUTION PLAN**

PERFORMING ORGANIZATION CONCURRENCE SHEET

The undersigned have reviewed the cost, schedule, and scope commitments established by this Project Execution Plan and agree to meet these commitments by the assignment of resources and applying an appropriate level of management attention to project execution

Concurrence by



RMRS Project Manager

Dated

8-3-99

Concurrence by



K-H Project Manager

Dated

8-3-99

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1 PROJECT IDENTIFICATION

The Headspace Gas Sampling and Analysis Project supports the DOE Strategic Plan by providing increased sampling and analytical capacity for TRU/TRM waste drums. This project is a necessary component of the Focus 2006 Plan. Certification for WIPP disposal requires sampling and analysis of headspace gases in TRU/TRM drums, at a rate of 5,000 to 10,000 drums per year through FY 2002. The Site's current throughput for this process can handle less than 800 drums per year. The Headspace Gas Sampling and Analysis (HGS&A) unit will be installed in Room 170 of Building 991 within the Protected Area. Planning for this project has been included in the Performance Measurement baseline, is included as part of the Waste Management Program, and is part of the overall Rocky Flats Closure Project.

1.1 PURPOSE

The purpose of the HGS&A Project is to provide increased sampling and analytical capacity for TRU/TRM waste drums. This project intends to install and make operational a HGS&A unit in Building 991 to meet the sampling and analysis needs to support waste shipments to the WIPP. The plan is to install and make operational the HGS&A unit in Building 991 by September 30, 1999.

1.2 BACKGROUND/HISTORY

In support of the mission to close Rocky Flats by the year 2006, one of DOE's main efforts is to ship waste off-site. RFETS has been certified for shipment of TRU/TRM waste to WIPP. A requirement for certification is to sample and analyze the headspace gases generated in TRU/TRM drums due to hydrolysis of organic materials by radiation. Current sampling and analytical processes limit the throughput to less than 800 drums per year. Estimates are that 5,000 to 10,000 drums will need to be sampled and analyzed each year through FY 2002. This project will acquire, install, and make operational, an automated sampling and analysis unit that can handle 5,000 drums per year.

1.3 PROJECT JUSTIFICATION

One of the major drivers in the RFETS closure process is the management and off-site shipment of existing and newly generated waste. This project will directly contribute to the achievement of that goal by providing WIPP-certified TRU/TRM wastes before shipment off-site. The HGS&A unit will provide an annual throughput of 5,000 drums rather than the current 800 drums. Otherwise, RFETS off-site shipments would have to be curtailed in response to current analytical capacity. In this case, the goals of the 2006 Closure Plan would not be met.

1.4 PROJECT FUNDING

The current FY99 budget in WAD 4 only allocates \$49,802 for this project. The estimated budget for installation and pre-operational activities for this project is \$210,000, based on historical data of similar installation activities in Building 569. There has been no prior funding for this project.

2 PROJECT SCOPE

2.1 SCOPE

The scope of this project is the following

- 1 Design necessary B991 modifications to install the HGS&A
- 2 Obtain necessary NEPA and RCRA documents to allow for building modifications, installation, and HGS&A operations
- 3 Modify B991 per the engineered modifications
- 4 Install the HGS&A
- 5 Perform System Operations tests on the HGS&A
- 6 Provide necessary documents to allow operations of the HGS&A such as Operational Safety Requirements (OSR) changes, Unreviewed Safety Question Determination, building and operating procedures, Building Emergency Response Operation (BERO), Emergency Preparedness Hazards Assessment (EPHA), Fire Hazards Analysis (FHA), and staffing plans
- 7 Train Subcontractor personnel to B991 operations
- 8 Determine the level of Readiness Assessment (RA) and conduct required RA
- 9 Obtain approval to operate the HGS&A

2.2 GOALS

Project specific goals include

- 1 Approve Engineering design by 1/30/99
- 2 Award construction subcontract by 4/30/99
- 3 Complete HGS&A installation by 7/30/99
- 4 Obtain Authorization Letter to Begin Operations by 9/30/99

2.3 DELIVERABLES

The project deliverables are

- 1 Approved NEPA documentation
- 2 CDPHE approved RCRA Class II Permit Modification
- 3 Authorization letter allowing RMRS to start HGS&A operations in B991

2.4 BOUNDARIES

RMRS Waste Management per direction from Kaiser-Hill has assigned the project team. The Department of Energy, through K-H, is funding the project. The project team will remain within the boundaries set forth in the baseline and reflected in the Project Execution Plan.

2.5 PROJECT DOCUMENTS

The Work Authorization Document defines the basis for DOE contractual authorization to perform work. Other project documents include project control documents, project plans including Health & Safety Plans, Quality Assurance Plans, CDPH&E RCRA Class II Permit Modification and the Project Execution Plan.

3 PROJECT WORK BREAKDOWN STRUCTURE

The following is the work breakdown structure for this project

HGS&A Project

- 1 Engineering Package
 - 1 1 Electrical design
 - 1 2 Design Package
- 2 Procurement Package
 - 2 1 Davis-Bacon determination
 - 2 2 Construction Statement Of Work
 - 2 3 Cost Estimates
 - 2 4 Award Package
- 3 Planning Package
 - 3 1 IWCP
 - 3 2 Construction/testing USQD
- 4 HGS&A
 - 4 1 Operating procedures
 - 4 2 Equipment delivery and setup
- 5 Building 991 Modifications
 - 5 1 Remove drums
 - 5 2 Building modifications
 - 5 3 HGS&A installation
 - 5 4 System Operations tests
 - 5 5 Project Acceptance & Transfer
- 6 Regulatory Package
 - 6 1 Environmental Checklist/Categorical Exclusion
 - 6 2 RCRA Class 2 Permit Modification
- 7 Authorization Basis
 - 7 1 OSR changes/USQD
 - 7 2 Implementation
- 8 HGS&A Procedures
 - 8 1 Procedures preparation
 - 8 2 Verify & validate procedures
- 9 HGS&A Training
 - 9 1 Training Implementation Plan
 - 9 2 Train/LOQI
- 10 Conduct of Operations Implementation
 - 10 1 BERO
 - 10 2 EPHA
 - 10 3 FHA
- 11 Readiness Assessment
 - 11 1 Level of Readiness determination
 - 11 2 Plan of Action
 - 11 3 Evidence file
 - 11 4 Readiness assessment
 - 11 5 Authorization letter

4 0 TECHNICAL APPROACH

4 1 TECHNICAL STRATEGY

The technical strategy necessary to make the HGS&A unit operational is to use qualified RMRS organizations and subcontractors to complete the tasks specified in the WBS. The following qualified organizations will be used to complete the activities of each WBS element.

<u>WBS Element</u>	<u>Organization</u>
1 Engineering Package	RMRS Engineers and Architects
2 Procurement Package	RMRS Procurement
3 Planning Package	RMRS Planning
4 HGS&A	NFT Inc
5 Building 991 Modifications	Subcontractor
6 Regulatory Package	K-H RCRA/NEPA organizations
7 Authorization Basis	RMRS Program Compliance (Nuclear Safety)
8 HGS&A Procedures	RMRS Waste Management Operations Support
9 HGS&A Training	RMRS Program Compliance (Training)
10 Conduct of Operations Implementation	RMRS Waste Management Operations
11 Readiness Assessment	RMRS Waste Management Operations

4 2 APPLICABLE REGULATORY REQUIREMENTS DOCUMENTATION

The Kaiser-Hill contract with DOE specifies the list of DOE directives applicable to work at Rocky Flats. The K-H Level 1 control documents conform to these requirements.

4 3 GUIDING PRINCIPLES

Guiding principles for the HGS&A Project include:

- Safety of workers and the public as a primary concern
- Protection of the environment
- Wise use of taxpayers' money

4 4 PROJECT CLOSURE

The Project Manager will be responsible for disposition of all project records and for sending them to Document Control. The IWCP package(s) must be signed and closed. All open subcontracts must be closed and a release of claims received from the various subcontractors.

5 PERFORMANCE CRITERIA

Project team success depends on several Critical Success Factors, and project performance to the work plan that completes the project mission. Performance criteria for the project include:

- 1 Maintaining safe working conditions through safety monitoring, safe work checklist, and general safety awareness through the principles of Integrated Safety Management
- 2 Maintaining high quality of work performed through continuous Quality Assurance monitoring and comparison to design requirements
- 3 Meeting the client's schedule along with any milestones by proper resource allocation
- 4 Keeping project cost within baseline and ensuring productivity

6 PROJECT RISK MANAGEMENT

6.1 ASSUMPTIONS

- 1 Additional budget will be provided from WAD 4 underspends
- 2 A subcontractor is available to perform work within the Protected Area
- 3 A subcontract is provided to MCS for use of NFT HGS&A unit
- 4 A RCRA Type II Permit modification will be accepted by the CDPHE
- 5 The new B991 FSAR will be in place by September 30, 1999. An USQD and OSR revisions will cover the operations of the HGS&A unit
- 6 The level of readiness for the HGS&A unit will be a management review with start-up authority from K-H

6.2 RISKS

Risks connected with completion of the project on schedule and budget are directly related to the assumptions stated above. The following provides an evaluation of each risk and mitigating actions to reduce such risks. Risks are given a low, medium, and high rating based on a subjective evaluation by the Project Manager.

Risk: Delay in awarding of contract to MCS and/or NFT delays operational start date of the HGS&A unit

Rating: High

Mitigating Action: Negotiations over costs and WIPP certification with Subcontractor can delay arrival of the HGS&A unit to the RFETS. Mitigating actions include conducting extensive negotiations between upper management of RMRS and the Subcontractor to resolve differences. Performance of pre-operational activities will be done concurrently with negotiations to minimize delays after the unit has been installed.

Risk: Underspends from other WAD 4 activities will not be available to cover budget shortfall

Rating: Medium

Mitigating Action: If underspends are not available from other activities, then there will be \$70K cost variance at the end of the fiscal year. This situation will be monitored monthly through the Project Performance Reports. Work will stop should underspends not be available to cover this activity unless a BCP is approved to allocate the needed funding to this activity.

7 ENVIRONMENTAL, HEALTH, QUALITY, AND SAFETY

7.1 ENVIRONMENTAL COMPLIANCE

RMRS is fully committed to regulatory compliance and environmental cleanup at RFETS. Activities on this project comply with the requirements of the following:

- Rocky Flats Cleanup Agreement (RFCA)
- Price Anderson Amendments Act (PAAA)
- Clean Air Act (CAA)
- National Environmental Policy Act (NEPA)
- Resource Conservation and Recovery Act (RCRA)
- Occupational Safety and Health Act (OSHA)

7 2 INTEGRATED SAFETY MANAGEMENT

The principles of Integrated Safety Management (ISM) will be rigorously followed on this project by addressing the five functions

- Define Scope of Work
- Identify and Analyze the Hazards
- Identify and Implement Controls
- Perform the Work
- Provide Feedback

An Activity Screening Form will be filled out before an IWCP is prepared for any proposed activity. Necessary safety documents such as screens and USQDs will be prepared per the required hazards analysis criteria.

7 3 QUALITY MANAGEMENT

All work shall be performed in accordance with the RMRS Quality Assurance Program requirements. All subcontracted work shall be performed under the cognizance of the responsible RMRS organizations such as Quality Assurance, Safety, and the Contract Technical Representative.

8 WASTE MANAGEMENT AND MINIMIZATION

Minimal construction waste will be generated during B991 modifications. This waste shall be disposed using B991 approved disposal containers after consultation and approval by the B991 RMRS Environmental Coordinator.

9 STAKEHOLDERS

Stakeholder involvement in this project is mandated by several laws and is the policy of the DOE. Stakeholders include regulators, public, project workers (including subcontractors), and anyone affected by the project.

9 1 COLLABORATION AND ENDORSEMENT

All project plans will be endorsed by involved parties such as the project manager, safety professional, waste management, Radiological Engineering, facility manager, and others as required to ensure focus towards the same objective. The project through its evolution will naturally receive endorsements from the project team, management, internal support organizations, the DOE, and external parties such as the CDPHE. These endorsements will be through design reviews, document reviews, ORC reviews, and e-mails. Approval of the reviews will be obtained through the appropriate signature sheets.

10 ORGANIZATION AND RESPONSIBILITIES

10.1 TEAM ORGANIZATION AND STRUCTURE

The organization of the overall TRU Waste Facilities Projects is shown in Figure 1 under the Project Management of Roland Bannister. Figure 2 shows the team organization for the HGS&A Project under the management of Ernie Garcia.

10.2 TEAM PROCESSES

The processes used by the project team includes

- Develop work plan
- Obtain project endorsement
- Authorize work performance
- Implement work
- Control work to the plan
- Communicate
- Close the project

10.3 TEAM INTERFACES

Section 4.1 provides the responsible organizations for each of the WBS elements. Table 10.3 provides a list of key personnel and responsibilities.

Table 10.3 Key Personnel and Responsibilities

Position	Name	Phone #	Responsibilities
RMRS Project Mgr	Ernie Garcia	5980	Has responsibility for execution of the project. Initiates definition of activities necessary for the project and coordinates activities of others. Proactively anticipates and identifies problems and ensures corrective actions are taken.
Waste Operations Interface	Mitch Thornton	5846	Provides primary oversight for Waste Management Operations. Ensures that proper operations input is provided to ensure that the facility meets the needs of Waste Management Operations. Coordinates with Construction Management to minimize impacts to B991/B984 operations. Provides Plan of Day support. Provides support to prepare procedures, BERO, EPHA, surveillance program, staffing plan, training, and readiness assessments.
Regulatory Compliance	Jean Reynolds	5204	Coordinates all interchange with federal and state regulators. Ensures that project activities are conducted in compliance with applicable environmental and regulatory requirements. Reviews project documents as necessary to ensure the work is completed within existing permit requirements. Tracks and coordinates completion of regulatory commitments.

Engineering	Keith MacLeod	2067	Serves as Project Engineer Obtains services from engineering disciplines to complete B991 modifications design Provides Title III engineering support
Maintenance Planner	Paul Gaumnitz	5565	Produces IWCPs and provides Davis-Bacon support
Procurement	Karen Fairchild	4726	Provides procurement support to review of SOW, IWCP, and engineering design Prepares Request for Proposals and provides Subcontract Administration support
Project Controls	Jim Berg	4301	Reports to the Project Manager on funding budget related matters Coordinates and verifies project controls data, information, reports, and performance analysis, and coordinates the change control process for the project Develops and maintains the project baseline schedule
Nuclear Safety	Ken Baier	2852	Provides Nuclear Safety support for OSR changes, preparation of USQDs and safety screens, and coordinates ORC reviews of required documentation
RMRS TRU Projects	Jerry O'Leary	3268	Serves as final user of this project Ensures that proper TRU Project input is provided to ensure that the facility meets the needs of the WIPP programs Provides technical support for WIPP certification
Criticality Safety Officer	Steve Sandoval	2149	Provides support for performing criticality safety evaluations and setting up a criticality safety program
Radiological Engineering	Jesus Cisneros	6542	Provides radiological engineering support to the project during ALARA evaluations, design reviews, and construction
Quality Assurance	Susan Sisk	8206	Provides QA support to the project during design reviews, procurement requisitions development, and construction
Industrial Safety	Brian Maria	2878	Provides Industrial Safety support during design reviews and construction
K-H Waste & Remediation Operations	Scott Anderson	9645	Serves as Program Manager for WAD 4 activities

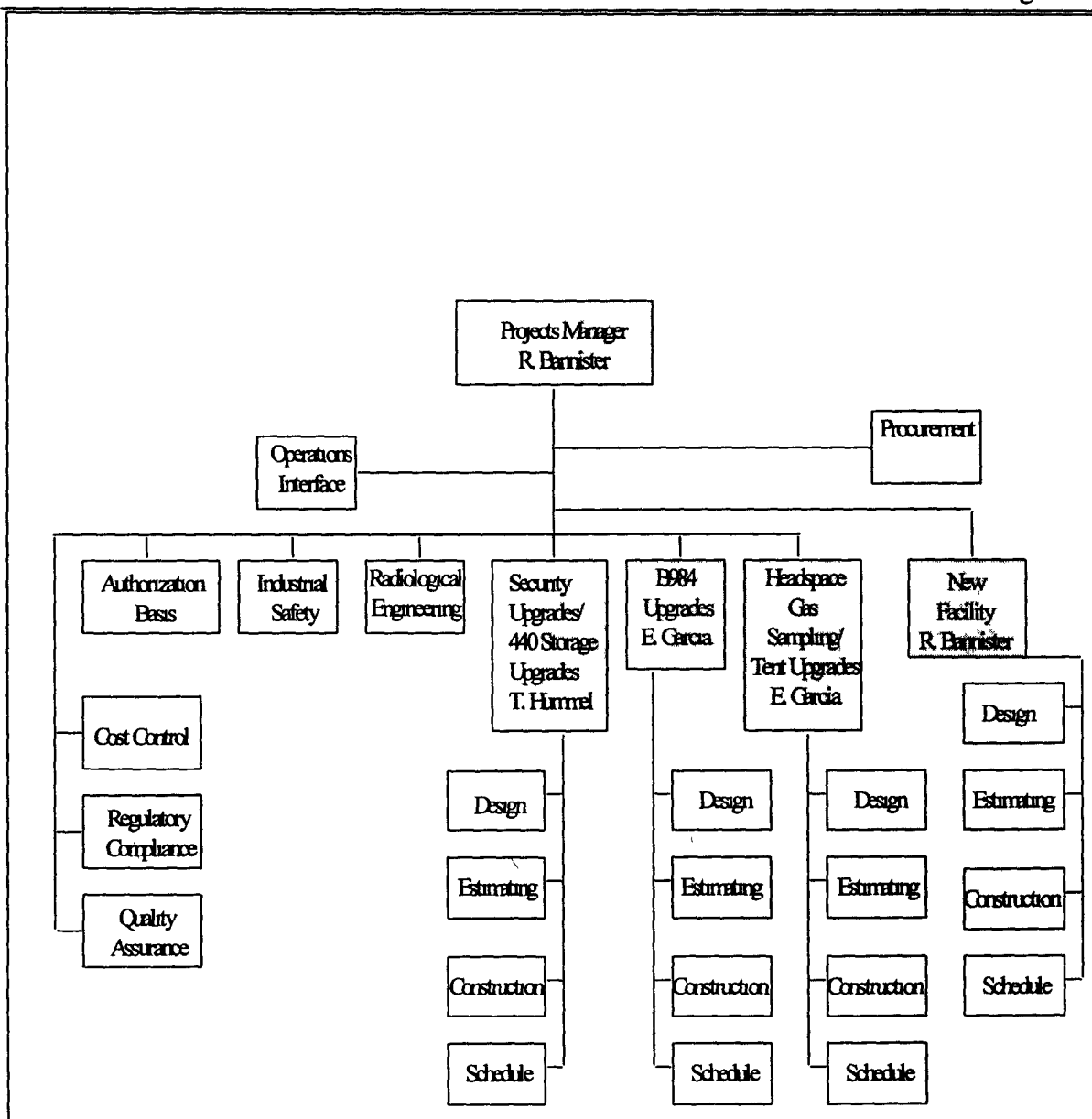


Figure 1 TRU Waste Facilities Projects Organization Chart

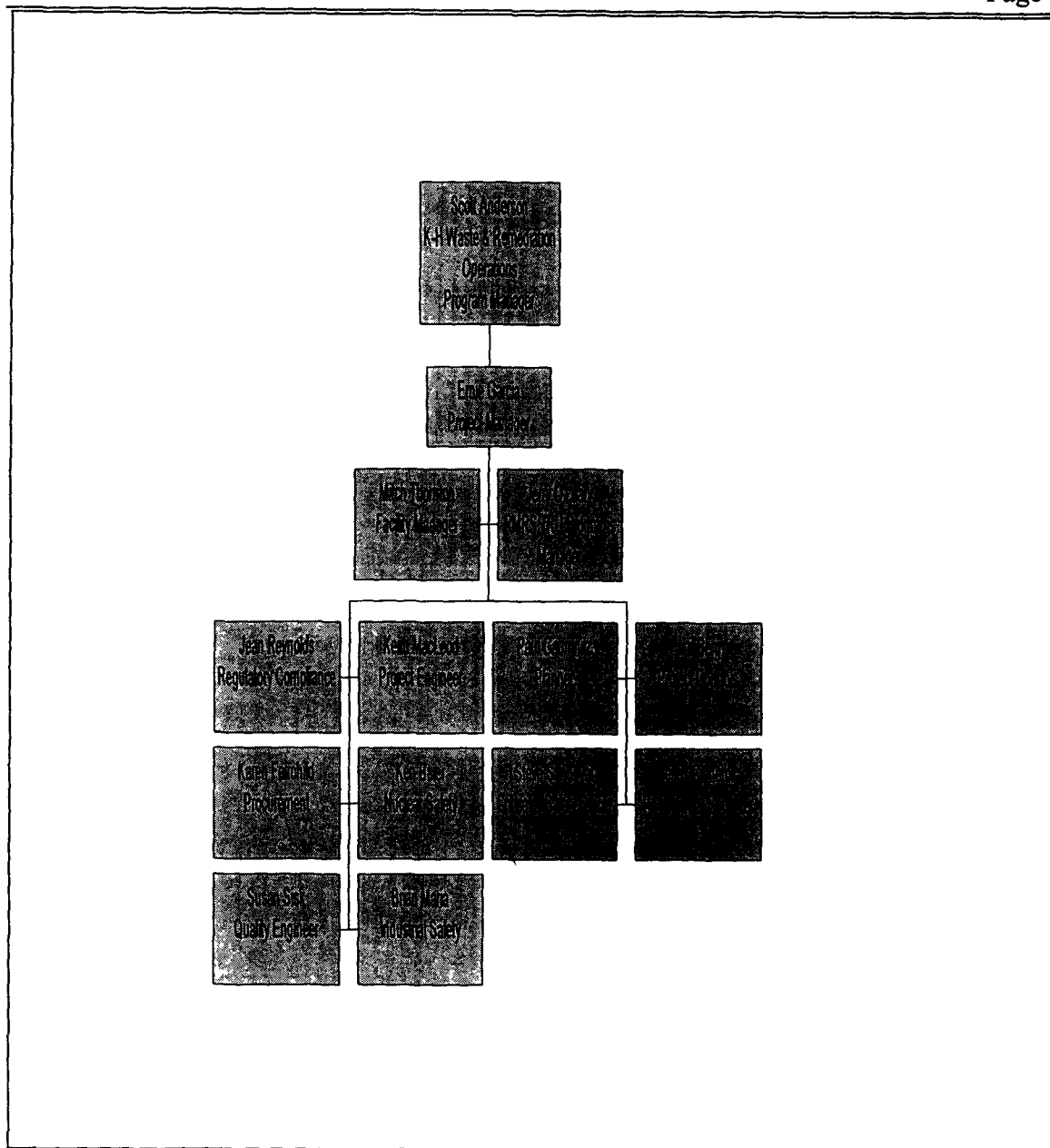


Figure 2 HGS&A Project Organization Chart

11 BUDGET

Fiscal Year	Labor \$	Non-Labor \$	Total FY \$
1999	\$36K	\$14K	\$50K
Contingency	-0-	-0-	-0-
Escalation	-0-	-0-	-0-
Total Baseline	\$36K	\$14K	\$50K
Project EAC	\$36K	\$174K	\$210K

11.1 BASIS AND VALIDATION

Project cost estimates are included in the BEST database. The basis of estimates was based on historical records and estimator's experience. Individual teams that do not contain the same people that do the work, led by the Kaiser-Hill P&I organizations have validated all cost estimates within BEST.

11.2 FINANCIAL WORK AUTHORIZATION

The Kaiser-Hill project control system uses three levels of authorization:

- 1) Authorization from DOE, RFFO to Kaiser-Hill,
- 2) Authorization from Kaiser-Hill to the prime subcontractors, and
- 3) Authorization from Kaiser-Hill and the prime subcontractors to lower-tier subcontractors.

Authorization from DOE, RFFO to Kaiser-Hill is performed at least once annually, just prior to the beginning of the new fiscal year. This authorization takes two forms: issue and approval of a PBS, and modification to the Kaiser-Hill contract to establish funding authority and allow Kaiser-Hill to incur costs. The PBS is issued at the project level, while funding authorization is made according to Budget and Reporting code structure. During the course of the year, funding authorization is updated based either on release of incremental funding or as the result of a Site Change Control Board action.

Subsequent to receiving authorization from DOE, Kaiser-Hill issues work authorization to the prime subcontractors. This authorization takes the form of a contract modification referred to as a Procurement Authorization Document, or PAD. The subcontractors' ability to incur costs is limited to the amount of the PAD. Thus, the PAD is modified periodically throughout the year. The PAD is issued at the lowest work breakdown structure level by which the prime subcontractor(s) will collect and accrue cost. Due to the late authorization from Congress, continuing resolution may be issued to continue work until formal budget authorization.

Authorizations from Kaiser-Hill and the prime subcontractors to lower-tier subcontractors, or third tier subcontractors take the form of purchase orders. Each purchase order establishes work scope, terms and conditions, and authorized cost.

12 PROJECT SCHEDULE

A Microsoft Project schedule for this project is contained in Appendix A. This is the baseline schedule and will be used by the project team for its day to day activities.

13 PROJECT CONTROLS, REPORTING, AND DOCUMENTATION

13 1 WORK INSTRUCTIONS

A set of Planning and Integration (P & I) Standards and Work Instructions describe the project planning and control system. The Work Instructions are available on the P&I Intranet Home Page and through the K-H Document Control.

13 2 PROJECT INTERFACES

The project uses Management by Walking Around, e-mail, and weekly meetings to maintain project communications. The Project Manager meets with individual project personnel to discuss project status and issues for resolution by management. The Project Manager also uses e-mail distributed to pertinent project personnel to advise of directives, changes, and other relevant information. Various weekly meetings are held. One weekly meeting is held with the Kaiser-Hill Waste & Remediation Operations Program Manager to discuss progress. The agenda includes reports from pertinent areas of the project team such as project management, design, safety, compliance, radiological engineering, project analyst, estimating, and construction management.

13 3 RECORDS MANAGEMENT PROCEDURES

Record Management will be done in accordance with K-H Procedure 1-77000-RM-001. Correspondence Control shall be maintained in accordance with K-H procedure 1-11000-ADM-003.

13 4 FINANCIAL PROCEDURES

The K-H accounting system is set up to provide financial data on a monthly basis. The project team will monitor the cost and ensure that the budget is managed.

13 5 CONTROL

The Project Manager will status the project schedule at least once a month and will analyze any problems in meeting the target date for those activities assigned to WAD 4. Project status will include comparison of BCWS to BCWP and ACWP. A BCWP will be calculated by the Project Manager, based upon actual production or achievement of milestones from different performing groups. Percentages shall be assigned for each activity ahead of time. Variances will be reported and explained and corrective actions identified.

13 6 CHANGE MANAGEMENT

K-H P & I Standard S-01 and Work Instruction INST-002 define the Rocky Flats baseline change control process. All baseline changes whether scope, schedule, or budget will have to be approved by either the Site or Internal Change Control Board before implementation. The K-H Project Manager will submit all such change requests to the DOE/RFFO office. Baseline Change Control Proposals (BCPs) may be categorized as Type I, II, and Administrative. Type I is an external BCP that requires the Board chairperson approval, Type II BCPs are internal at the WAD level and do not breach Type I thresholds. The Administrative BCPs are internal changes within the WBS elements and do not alter the approved Baseline.

Appendix A

Project Schedule

ID	Task Name	Dur	Start	Finish	% Done	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
						Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	Headspace Gas Sampling & Analysis	196d	Fri 10/23/98	Wed 9/1/99	93%												
2	Building 991 Modification	164d	Fri 10/23/98	Wed 7/14/99	99%												
3	Provide hard card request	1d	Fri 10/23/98	Fri 10/23/98	100%												
4	Prepare EO/WCP	75d	Mon 10/26/98	Wed 2/24/99	100%												
5	Obtain Davis-Bacon determination	5d	Mon 1/25/99	Fri 1/29/99	100%												
6	Develop construction USQD	15d	Mon 1/25/99	Mon 2/15/99	100%												
7	USQD review & approval	15d	Thu 2/25/99	Thu 3/18/99	100%												
8	Procure subcontractor for installation	15d	Tue 2/16/99	Wed 3/10/99	100%												
9	Install modifications	10d	Mon 5/3/99	Mon 5/17/99	100%												
10	Receive HGS&A unit	5d	Mon 6/14/99	Fri 6/18/99	100%												
11	Install HGS&A unit	10d	Mon 6/21/99	Tue 7/6/99	100%												
12	Do performance tests	5d	Wed 7/7/99	Wed 7/14/99	75%												
13	PA&T	1d	Wed 7/7/99	Wed 7/7/99	0%												
14	Procurement	119d	Mon 11/2/98	Mon 5/10/99	100%												
15	Make presentation to union	1d	Wed 11/4/98	Wed 11/4/98	100%												
16	Revise SOW	5d	Mon 11/2/98	Fri 11/6/98	100%												
17	Negotiate with NIFT	2d	Mon 11/9/98	Tue 11/10/98	100%												
18	Submit SOW	3d	Wed 11/11/98	Mon 11/16/98	100%												
19	Release SOW to vendor	10d	Tue 11/17/98	Thu 12/3/98	100%												
20	Receive proposal	5d	Fri 12/4/98	Thu 12/10/98	100%												
21	Tech evaluation	40d	Mon 12/14/98	Mon 2/15/99	100%												
22	Award subcontract	54d	Tue 2/16/99	Mon 5/10/99	100%												
23	Regulatory	48d	Mon 10/26/98	Wed 1/13/99	100%												

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ID	Task Name	Dur	Start	Finish	% Done	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
						Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
53	Prepare evidence file	2d	Fri 8/13/99	Mon 8/16/99	0%												Larson
54	Do management review	5d	Thu 8/19/99	Thu 8/26/99	0%												Thorn
55	Resolve MR action items	2d	Fri 8/27/99	Mon 8/30/99	0%												Thor
56	Letter from RMRS to K-H	1d	Tue 8/31/99	Tue 8/31/99	0%												Thor
57	K-H letter to authorize	1d	Wed 9/1/99	Wed 9/1/99	0%												And
58	Approve HGS&A operations	0d	Wed 9/1/99	Wed 9/1/99	0%												9/1

21/21